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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,597	11/30/2001	Shinji Asano	040302-0280	4100
22428	7590	02/04/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			YEE, DEBORAH	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/996,597

Applicant(s)

ASANO ET AL

Examiner

Deborah Yee

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 3-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 16 to 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 3 to 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 9-02-03.

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 2, and 16 to 27 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 16 to 20 and 25 to 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watari et al. (US Patent 6,475,305).
4. Watari in claim 12 discloses a steel alloy composition with constituents whose wt% ranges overlap those recited by the claims; such overlap renders applicant's composition prima facie obvious because it would be obvious to one of ordinary skill in the art to select the claimed alloy ranges from the broader disclosure of the prior art

Art Unit: 1742

because the prior art has similar high strength and hardness properties. Note that surface hardness of prior art alloy ranges from 160 to 350HV and overlaps with applicant's hardness range of 195-225HV (91 to 96HRB).

5. Even though prior art does not teach using steel for a race as recited by the claims, such would not be a patentable difference since it is merely applicant's future and intended use.

6. Even though prior art does not teach the exact process limitations of forging and normalizing as recited by claims 16 to 19, such would not be a patentable difference.

Note in a product-by-process claim, the patentability is determined by the product per se and not the process limitations. The burden falls to the applicant to show that any process steps associated with the claimed product results in a materially different product from those of the prior art because there is nothing in the record before the examiner to reasonably conclude that applicant's product differs in kind from those obtained by the reference, see MPEP 2113.

7. In regard to the method claims 25 to 27, note that Watari on lines 30 to 40 of column 17 teaches subjecting steel to hot forging at 1250C with a finishing temperature of 1000C or higher, air cool, and normalizing at 850 to 1000C (within applicant's normalizing range of 850+/- 10C). Even though prior art hot forges at 1250 to 1000C whereas the claimed method forges at 720 to 790C, such would not be a patentable difference since the lower claimed forging temperature range is not shown to be somehow critical or productive of new and unexpected results (e.g. by comparative test data). Note the prior art teaches an analogous alloy composition with hardness values

and a pearlite/ferrite microstructure similar to the present invention. Since end results are substantially the same, then claims would not patentably distinguish over prior art.

8. Claims 1,2 and 16 to 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2002-12941.

9. The English abstract of JP'941 discloses a steel alloy composition with constituents whose wt% ranges overlap those recited by the claims; such overlap renders applicant's composition prima facie obvious because it would be obvious to one of ordinary skill in the art to select the claimed alloy ranges from the broader disclosure of the prior art because the prior art has similar high strength and hardness properties. Note that surface hardness of prior art alloy ranges from 83 to 97HRB overlaps with applicant's claimed hardness range of 91-96HRB.

10. More specifically JP'941 discloses examples 2, 3 and 8 on pages 5 and 6 which meets the claimed composition and hardness but fails to include Mo. It would, however, be obvious to incorporate Mo since a broad Mo range of 0.1 to 1% is taught in the English abstract. Also examples contain S contents within the 0.1 or less recited by claim 2.

11. Even though prior art does not teach using steel for a race as recited by the claims, such would not be a patentable difference since it is merely applicant's future and intended use.

12. Even though prior art does not teach the process limitations of forging and normalizing as recited by claims 16 to 19, such would not be a patentable difference. Note in a product-by-process claim, the patentability is determined by the product per se

Art Unit: 1742

and not the process limitations. The burden falls to the applicant to show that any process steps associated with the claimed product results in a materially different product from those of the prior art because there is nothing in the record before the examiner to reasonably conclude that applicant's product differs in kind from those obtained by the reference, see MPEP 2113.

13. The English abstract of JP'941 teaches a ferrite-pearlite microstructure which meets claim 20.

***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 21 to 24 are rejected under 35 U.S.C. 102(b) as being anticipated by or in the alternative, under 35 USC 103(a) as obvious over Japanese patent 9-291337.

16. JP'337 specific alloy examples H and J on pages 4 and 5 meet the claimed composition, and have hardness values of 62 and 59HRC, respectively that meet the claimed 58HRC or more recited by claim 21 and 52HRC or more recited by claim 22. Since prior art alloys meet the hardness and compositional limitations, then the martensite microstructure recited by claim 23 would be expected.

17. Moreover, column 2 on page 4 discloses induction hardening at 1100 to 1050C followed by tempering at 810 to 600C.

18. Even though prior art does not teach the process limitations of warm forging and normalizing and tempering at 300C as recited by claims 21 to 24, such would not be a patentable difference. Note in a product-by-process claim, the patentability is determined by the product per se and not the process limitations. The burden falls to the applicant to show that any process steps associated with the claimed product results in a materially different product from those of the prior art because there is nothing in the record before the examiner to reasonably conclude that applicant's product differs in kind from those obtained by the reference, see MPEP 2113.


### ***Priority***

19. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deborah Yee  
Primary Examiner  
Art Unit 1742

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